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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,257	02/27/2004	Christian Joachim Keidel	8674.004.US0000	1296

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Novak Druce + Quigg, LLP
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EXAMINER

OMGBA, ESSAMA

ART UNIT	PAPER NUMBER
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3726

MAIL DATE	DELIVERY MODE
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12/23/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/787,257	Applicant(s) KEIDEL ET AL.	
	Examiner Essama Omgba	Art Unit 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6,7,10,13-16,18,19,23-25,28,29,32 and 35-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6,7,10,13-16,18,19,23-25,28,29,32 and 35-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 2, 2008 has been entered.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 6, 7, 10, 13-16, 18, 19, 23-25, 28, 29, 32 and 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Bryans et al. (US Patent 6,973,815), Park (US Patent 4,589,932) or Ohori et al. (JP 2000178704), Liu et al. (US Patent 5,108,520) and Chakrabarti et al. (US 2002/0150498).

With regards to claims 1, 6, 7, 10, 13, 14, 18, 28, 29 and 32, Applicant, at pages 1-3 of the specification to be known as AAPA, discloses a method for producing an integrated monolithic aluminum structure for a part of a wing skin or frame structure for an aircraft wherein a AA7XXX aluminum alloy plate with a thickness in the range of 15 to 75 mm is bent to form a predetermined shaped and after the bending

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operation, machining the plate to produce the monolithic structure, wherein the aluminum alloy plate has been quenched and stretched (see paragraph [0043]). AAPA does not disclose the bending operation being a cold forming operation of a AA7XX aluminum plate that has been brought to a temper selected from the group consisting of T4, T73, T74 and T76, and heat-treating the shaped structure comprising artificially ageing the shaped structure to a T6, T79, T78, T77, T76, T74, T73 or T8 temper prior to machining. However Bryans et al. teaches cold forming an aeronautical member 16 from a AA7XX aluminum alloy plate that has been brought to a T7451 temper (col. 5, lines 3-7) by bending in order to form a shaped structure with a built-in radius as attested by Bryans et al., see column 4, lines 13-17 and 31-33 and column 6, lines 59-67 and column 7, lines 1-11. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used an aluminum alloy plate that has been brought to a T7451 temper and to have bent the aluminum plate that had been brought to a T7451 temper by cold forming, in the process of AAPA, in light of the teachings of Bryans et al., as is known in the art. Further Park teaches solution heat treating, quenching and natural aging an aluminum alloy plate member to a T4 temper, shaping the T4 tempered aluminum alloy by bending and artificially aging the bent aluminum alloy to a T6 temper, see column 6, lines 39-55. Ohori et al. also teaches a double heat treatment of aging aluminum alloy before and after bending, see abstract. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have artificially aged the shaped alloy plate of AAPA/Bryans et al. to a T6

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temper, in light of the teachings of Park, in order to improve strength of the shaped aluminum alloy. Regarding the recitation of the composition of the AA7xxx-series aluminum alloy, Applicant should note that the 7xxx-series of aluminum alloys has in general such composition as attested by Liu et al., see column 3, lines 16-52.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used an aluminum alloy with the claimed composition since it has been held that "a prior art reference that discloses a range encompassing a somewhat narrower claimed range is sufficient to establish a prima facie case of obviousness." *In re Peterson*, 315 F.3d 1325, 1330, 65 USPQ2d 1379, 1382-83 (Fed. Cir. 2003), see MPEP § 2144.05. Regarding the recitation of artificially aging the shaped structure to a T6, T79, T78, T77, T76, T74, T73 or T8 temper condition, Applicant should note that it is typical to artificially age such aluminum alloys to such temper condition to achieve the desired benefits such as peak strength T6-type over-aged T7-type tempers. It is well known to those skilled in the art that for a given 7xxx-series alloy, the peak strength T6-type temper provides the highest strength combined with the lowest fracture toughness and corrosion resistance while the most over-aged temper such as T73-type temper for the same alloy provides the highest fracture toughness and corrosion resistance combined with the lowest strength. An appropriate temper is generally chosen somewhere between these two extremes to suit a particular application, see paragraph [0009] of Chakrabarti et al. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have artificially aged the shaped structure

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of AAPA/Bruner et al./Liu et al. to such tempers, as disclosed by Chakrabarti et al. to achieve desired benefits.

For claims 15 and 16, Applicant should note that the method disclosed by AAPA/Bryans et al./Park/ Ohori et al./Liu et al./Chakrabarti et al. would bring the distortion to an acceptable value.

For claims 19 and 23-25, see column 6, lines 26-44 of Bryans et al. Regarding the recitation of the particular distortion target of less than 0.13 mm, Applicant should note that it is within the general knowledge of one of ordinary skill in the art to set acceptable working parameters for the desired final product, and in as much as the claimed method and product are obvious over AAPA/Bryans et al./Park/Ohori et al./Liu et al./Chakrabarti et al. as shown above, it would have been obvious to one of ordinary skill in the art that the claimed longitudinal distortion and lack of differing inner stress levels would be achieved by the method of AAPA/Bryans et al./Park/Ohori et al./Liu et al./Chakrabarti et al.

Regarding claims 35-37, see column 1, lines 14-22 and 45-47 and column 2, lines 37-44 of Bryans et al.

Regarding claim 38, see column 6, lines 49-52 of Bryans et al. where finish machining is disclosed.

Response to Arguments

4. Applicant's arguments with respect to claims 1, 6, 7, 10, 13-16, 18, 19, 23-25, 28, 29, 32 and 35-38 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Essama Omgba whose telephone number is (571) 272-4532. The examiner can normally be reached on M-F 9-6:30, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Essama Omgba/
Primary Examiner, Art Unit 3726

eo
December 20, 2008